••• REMARKS/ARGUMENTS •••

The present amendment the independent claims 1 and 9 have each been changed to recite that protuberances are formed after the thermoplastic synthetic fibers and pulp fibers have been subjected to high velocity water jets which stabilize a texture of the mixture of thermoplastic synthetic fibers and pulp fibers so that as the protuberances are subsequently formed the thermoplastic synthetic fibers and pulp fibers are reoriented.

Support for this limitation can be found on page 6, lines 14-18 whereat it is disclosed that the first zone (18) of high velocity water jets (See Fig. 3) stabilize a texture of the wet sheet.

Further, in the paragraph bridging pages 5-6 it is disclosed that the fibers are reoriented when the protuberances are formed. Further, the goal of rearranging the fibers when the protuberances are formed is discussed in the paragraph bridging pages 1-2.

Entry of the changes to the claims is respectfully requested.

Claims 1-3 and 6-16 are pending in this application.

Claims 1-3 and 6-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,100,324 to Anderson in view of U.S. Patent No. 4,879,170 to Radwanski et al.

The Examiner has relied upon Anderson et al. as disclosing:

> ...a nonwoven fabric comprising meltblown microfibers and a pulp material. The microfibers have a diameter of 2-6 microns and have a length of about the same as or greater than a staple fiber, which seems to encompass the claimed range, (staple fibers are generally known to have a length of anywhere from 25-180 mm). See col. 2, lines 46-54. The pulp material may have a length of 0.5 -10 mm. See col. 2, lines 55-62. The pulp fibers are microfibers may be present in the claimed proportions.

> The nonwoven may have a basis weight within the claimed range. See example IX. The nonwoven is useful as an absorbent wipe. Anderson differs from the claimed invention because Anderson forms the embossed areas via heat bonding which may reduce the absorbency of the fabric at least at the embossed areas.

The Examiner has relied upon Radwanski et al. as teaching that:

> ...nonwoven fabrics may be hydroentangled on a mesh screen, forming wire or apertured plate in order to form embossments or protuberances without changing the properties such as absorbency, etc. of the fabric. See col. 6, line 64 - col. 7, line 17; col. 14, line 4-41; col. 23, lines 29-50.

In combining the teachings of Anderson et al. and Radwanski et al. the Examiner takes the position that:

> ...it would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the embossed pattern by hydroentangling the fabric. One of ordinary skill in the art would have been motivated to employ hydroentangling and a forming fabric rather than a heat embossing process in order to maintain the absorbency of the fabric even in the patterned areas.

With regard to the limitation in claim 1 that the synthetic fibers and pulp fibers are "mixed with each other and entangled by subjecting a mixture of said thermoplastic synthetic fibers and said pulp fibers to high velocity water jet streams", the Examiner concedes that Anderson does not teach hydroentangling.

However, the Examiner states that:

> Radwanski clearly teaches that it is advantageous to hydroentangle the fabric in order to form protuberances so as to maintain the absorbency of the entire fabric, rather than forming fused areas by embossing. See 6, line 64- col. 7, line 17; col. 14, lines 4-41. With regard to the limitation that the protuberances are formed by embossing

and form non-fused areas, Radwanski teaches forming protuberances and teaches that the fibers within the protuberances are non-fused.

On pages 3-4 of the Office Action the Examiner states that:

...with regard to the steps of stabilizing the mixture with high pressure water jets before hydroentangling, the instant claims are drawn to a product, not a process of making. Therefore, **the burden is on Applicant to show that the process differences result in an unobvious difference in the product, since if the mixture of Anderson is hydroentangled as taught by Radwanski, the claimed protuberances and non-fused areas will be formed and the web will be both stabilized and entangled by the hydroentangling step**. Also, with regard to the stabilizing step, Radwanski teaches that the coform can be passed through the hydroentangling apparatus a number of times to completely entangle the coform. See col. 14, lines 29-32. Therefore, Radwanski teaches the stabilizing step since the first pass equates to the claimed stabilizing step.

Initially, it is pointed out that applicants' step of initially stabilizing the texture of the wet sheet 17 prior to forming protuberances is illustrated in Fig. 2 as follows:

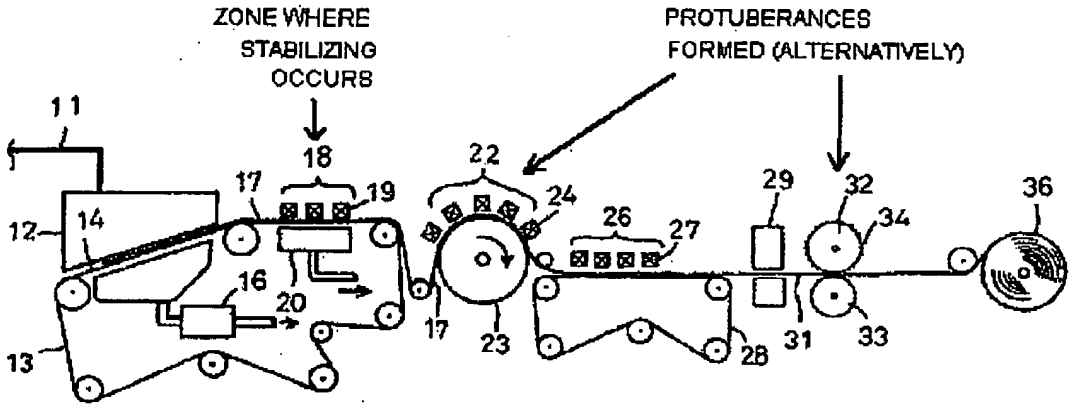


FIG.3

In contrast to applicants' invention, Radwanski et al. form the protuberances at the first zone of high velocity water jets as illustrated in Fig. 1:

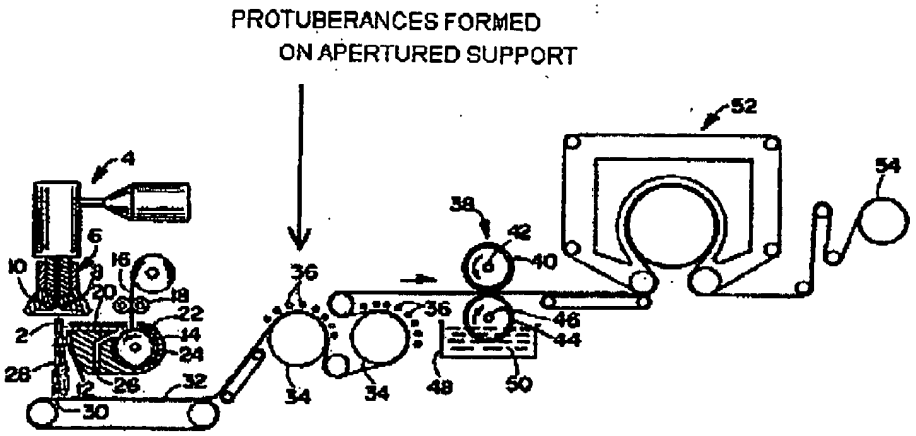


FIG. 1

These different processes result in different and distinguishing structural features which distinguish applicants' claimed invention over the prior art relied upon by the Examiner.

Radwanski et al. is very clear about the manner in which it is required that "the coform (admixture) must have sufficient free and mobile fibers to provide the desired degree of entangling and intertwining, i.e., sufficient fibers to wrap around or intertwine and sufficient fibers to be wrapped around or intertwined."

This structure is shown in Fig. 2A as follows:

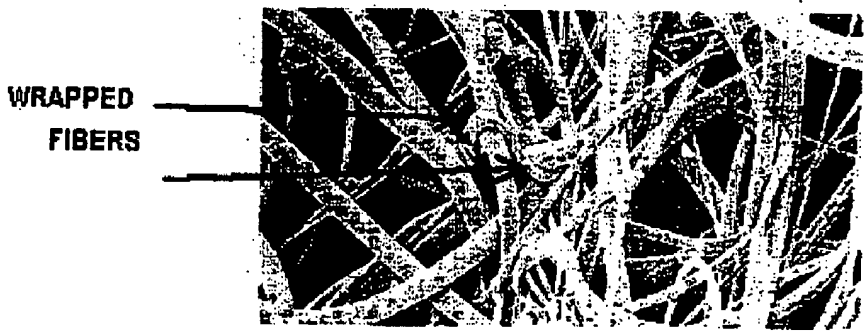


FIG. 2A

As can be appreciated, when the water jets are initially directed to the coform on the apertured support surface of Radwanski et al. the fibers are initially substantially loose so that they are free to move around against the apertured support surface as they also wrap around or intertwine as shown in Fig. 2A. The result, as shown, is a high degree of randomness.

In contrast to Radwanski et al. the present invention involves stabilizing the wet sheet of synthetic fibers and pulp fibers at zone 18, before protuberances are formed at zone 22 or at rolls 32, 33.

The initial stabilizing of the wet sheet of synthetic fibers and pulp fibers involves allowing the wet sheet of synthetic fibers and pulp fibers to ascend the sloped endless belt 13 which, as discussed on pages 9-10 of applicants' specification causes produces a relative isotropic characteristic. This isotropic characteristic is stabilized in the initial zone 18 so that the stabilized fibers can be smoothly rearranged about the supporting structure that forms the protuberances.

As can be appreciated, the resulting nonwoven fabric will have a much more uniform isotropic characteristic than the nonwoven fabric of Radwanski et al. which is not subject to any stabilization process before the protuberances are formed.

It is important to note that applicants' invention addresses a particular problem associated with the prior art which is not at all addressed or solved by Radwanski et al.

In this regard, as discussed on pages 1-2 of applicants' specification, when nonwoven fabrics are passed through embossing machines it is not possible to control the manner in which the individual fibers are rearranged. As a result, for example, apertures which are intended to be open and well defined have nonconforming fibers extending therein.

In order to control the manner in which the fibers are rearranged, applicants' invention provides an initial step of stabilizing the wet sheet of synthetic fibers and pulp fibers as discussed above.

As can be appreciated, the process of Radwanski et al. which does not include an initial stabilizing step, would certainly allow the individual fibers to be rearranged in an uncontrolled, totally random manner. As a result, the process of Radwanski et al. would be subject to the same problem that is associated with the prior art which has been both identified and solved by applicants' invention.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is

respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §103 to establish a *prima facie* case of obviousness of applicants' claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejection of the claims should hence be withdrawn.

Therefore, reconsideration and withdrawal of the outstanding rejection of the claims and an early allowance of the claims is believed to be in order.

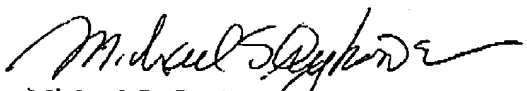
It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

If upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved, the Examiner is invited to contact applicant's patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of

time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,



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